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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------------------------------------------------------------------|-------------|----------------------|----------------------|------------------|
| 10/067,029 | 02/04/2002 | Narayan Sundararajan | 884.594US1 | 4992 |
| 21186 | 7590 | 04/13/2004 | EXAMINER | |
| SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A. P.O. BOX 2938 MINNEAPOLIS, MN 55402 | | | STRZELECKA, TERESA E | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1637 | |
| DATE MAILED: 04/13/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

10/067,029

Applicant(s)

SUNDARARAJAN ET AL.

Examiner

Teresa E Strzelecka

Art Unit

1637

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 29 March 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☐ The a) ☐ affidavit, b) ☐ exhibit, or c) ☐ request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: 18,19 and 21-23.

Claim(s) objected to: _____.

Claim(s) rejected: 4,6-13,24 and 26-31.Claim(s) withdrawn from consideration: 5, 20, 25.

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

TS 4/8/04

JEFFREY FREDMAN
PRIMARY EXAMINER

Art Unit: 1637

Explanatory Note to the Advisory Action

1. This Advisory action is in response to an amendment filed March 29, 2004. Claims 4-13 and 18-31 were previously pending, with claims 5, 20 and 25 withdrawn from consideration.

Applicants amended claims 4 and 24. The amendment has been entered.

2. Applicants' amendment to claims 4 and 24 fails to overcome the rejection of these claims under 35 U.S.C. 102(e) over Margrave et al. Applicants argue that Margrave et al. do not teach modifying the frictional coefficient of the nanotube in a reaction separate from attaching of the reactive molecule. However, as indicated in the previous office action, Margrave et al. teach both processes in separate steps: Margrave et al. teach a modification of carbon nanotubes with fluorine groups which also constitute reactive molecules (col. 3, lines 63-67; col. 4, lines 1-5). However, in a separate step the fluorine atoms can then be substituted with other molecules, such as methyl lithium (col. 4, lines 6-22). Finally, more complex functional groups (which are also reactive molecules and attachment of which results in modification of the friction coefficient) are added to the side walls of the nanotubes (col. 10, lines 11-67; col. 11, lines 1-46).). Therefore, Margrave et al. teach attaching a reactive molecule to the carbon nanotube and modifying the friction coefficient in separate steps.